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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/727,358	11/30/2000	Toru Ishimoto	116-001940	3393

7590

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EXAMINER

QUASH, ANTHONY G

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Applicant(s)

09/727,358

Applicant(s)

TORU ISHIMOTO

Examiner

Anthony Quash

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-- The MAILING DATE of this communication appears on the reverse with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☒ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

Applicant's request for reconsideration of the finality of the rejection of the last Office action paper number 7 is persuasive and, therefore, the finality of that action is withdrawn.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-8 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamada [662]. As per claim 1, Yamada [662] discloses a method of inspecting the state of completeness of the formation of a large number of holes formed in a wafer sample by directing a charged particle beam (3) to the sample (14) and obtaining resulting signals, the method comprising the steps of establishing measurement regions containing holes on the sample, directing the charged particle beam (3) to the measurement regions on the sample containing the holes, detecting the electrical current flowing through the wafer sample (14) to ground for each of the measurement regions, finding data about a current distribution on the sample (14) from the detected values of electrical current,

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and displaying a brightness based map on a display unit (5) according to the found data about the current distribution. See Yamada [662] abstract, figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 2 lines 40-67, columns 3-5, col. 7 lines 25-40, column 8, col. 9 lines 25-35, col. 10 lines 34-37, col. 11 lines 50-67, col. 13 lines 1-5, 35-67, col. 14 lines 35-65, col. 15 lines 10-15, col. 16 lines 44-50, col. 17 lines 25-35, 45-67, and col. 18 lines 55-67.

As per claim 2, Yamada [662] discloses the size and positions of the measurement regions being set so that plural holes are present within each of the measurement regions. See Yamada [662] figs. 1-3, 9b-10b, 18-20, 24-26, 29-30, 32.

As per claim 3, Yamada [662] discloses the regions being irradiated with the charged particle beam (3) are located in identical positions within periodic patterns formed on the sample (14). See Yamada [662] figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 13 lines 1-5, 54-67.

As per claim 4, Yamada [662] discloses the charged-particle beam being scanned across each of the measurement regions, and wherein the electrical current is accumulated during scan and a resulting value being used as a measurement value derived from each measurement region. See Yamada [662] figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 3 lines 5-20, col. 5 lines 9-23, col. 14 lines 38-55, col. 17 lines 25-35.

As per claim 5, Yamada [662] discloses the charged particle beam being scanned across each of the measurement regions, and wherein an average value of the electrical current during the scanning period is used as a measurement value derived

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from each measurement region. See Yamada [662] figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 3 lines 5-20, col. 5 lines 9-23, col. 14 lines 38-55, col. 17 lines 25-35.

As per claim 6, Yamada [662] discloses each of the measurement regions being totally irradiated with the charged particle beam for a given time in a static manner, and wherein the electrical current being accumulated during the given time and a resulting value being used as a measurement value derived from each measurement region. See Yamada [662] figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 3 lines 5-20, col. 5 lines 9-23, col. 14 lines 38-55, col. 17 lines 25-35 and col. 18 lines 55-67.

As per claim 7, Yamada [662] discloses each of the measurement regions being totally irradiated with the charged particle beam for a given time in a static manner, wherein an average value of the electrical current is used as a measurement value derived from each measurement region. See Yamada [662] figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 3 lines 5-20, col. 5 lines 9-23, col. 14 lines 38-55, col. 17 lines 25-35 and col. 18 lines 55-67.

As per claim 8, Yamada [662] discloses a nondestructive method of inspecting the state of completeness of the formation of a large number of holes formed in a wafer sample (14) by directing a charged particle beam (3) to the sample (14) and obtaining resulting signals, the method comprising the steps of establishing measurement regions containing holes on the sample such that size and positions of the measurement regions are so set that plural holes are present within each of the measurement regions and the regions are located in identical positions within periodic patterns formed on the sample (14), directing the charged particle beam (3) to the measurement regions on the

sample (14) containing the holes, detecting an electrical current flowing through the wafer sample to ground for each of the measurement regions, finding data about a current distribution on the sample from detected values of electrical current, and displaying a brightness based map on a display unit (5) according to the found data about the current distribution. See Yamada [662] abstract, figs. 1-3, 9b-10b, 15-20, 24-26, 29-30, 32, col. 2 lines 40-67, columns 3-5, col. 7 lines 25-40, column 8, col. 9 lines 25-35, col. 10 lines 34-37, col. 11 lines 50-67, col. 13 lines 1-5, 35-67, col. 14 lines 35-65, col. 15 lines 10-15, col. 16 lines 44-50, and col. 17 lines 25-35, 45-67.

### ***Priority***

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

### ***Response to Arguments***

Applicant's arguments, see Amendment B paper number 8, filed 6/26/03, with respect to the rejection(s) of claim(s) 1-8 under Lo [787] have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Yamada [662].

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**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony Quash whose telephone number is (703)-308-6555. The examiner can normally be reached on M-F from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Lee, can be reached on (703)-308-4116. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



A. Quash 7/16/03



**JACK BERMAN**  
**PRIMARY EXAMINER**